Docket No.: 113019.179US2 PATENT/OFFICIAL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE PECENED DEC 2 4 2003 PED TECH CENTER 1600/2900

In re Application of

Ke-Wen DONG et al.

Serial No. 09/829,073

Filed: April 9, 2001

DEC 1 8 2003

Group Art Unit: 1641

Examiner: Lisa V. Cook

For: HUMAN ZONA PELLUCIDA PROTEIN 3 AND USES THEREOF

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the documents listed on the attached form PTO-1449. It is respectfully requested that the documents be expressly considered during the prosecution of this application, and that the documents be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

In accordance with 37 C.F.R. § 1.97(g) and (h), the filing of this IDS should not be construed as a representation that a search had been made or that information cited is, or is considered to be, material to patentability as defined in 37 C.F.R.§ 1.56 (b), or that any cited document listed or attached is (or constitutes) prior art. Unless otherwise indicated, the date of publication indicated for an item is taken from the face of the item, and Applicant reserves the right to prove that the date of publication is in fact different.

The references listed on Sheet Nos. 1 and 2 of Form PTO-1449 were cited by or submitted to the U.S. Patent and Trademark Office in parent application Serial No. 09/252,828,

Serial No. 09/829,073

filed February 19, 1999, which is relied upon for an earlier filing date under 35 U.S.C § 120. Copies of these references are not attached under 37 CFR 1.98(d). The other references were previously submitted with this Information Disclosure Statement on October 20, 2003.

This Information Disclosure Statement is being filed prior to the first Office Action on the merits of the RCE application. Accordingly, no fee is required. The Commissioner is hereby authorized to charge any necessary fees that may be required for this submission, or credit any overpayment to deposit account no. 08-0219.

Respectfully submitted,

HALE AND DORR LLP

Maria L. Maebius

Registration No. 42,967

1455 Pennsylvania Avenue, NW

Washington, DC 20004

TEL 202.942.8400 FAX 202.942.8484

Date: 18 December 2003

SHEET <u>1</u> OF <u>6</u>

		<u> </u>				HEET <u>1</u> O	<u> </u>		
			ATTY. DOCKET NO. SERIAL NO.						
INF	FORMATION	DISCLO	SURE	113019.179US2		09/829,073			
1111	CITATIO		DURL						
	APPLIC								
	APPLIC	AHON							
014	E. Comments		TOE						
/	PTO-	1449) /()	A DDI ICANIT					
DEC 1 8	2003).dl	APPLICANT Ke-Wen DONG et al.					
E.		(0	EC 1 8 2003		o ct ai.				
TE TRADE	: **********************************	是	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>			GROUP 1641			
CHAD.		N. S.	Ta rought			1041			
			U.S. PATENT DO	OCUMENTS				. * 	
EXAMINER'S INITIALS	PATENT NO.	DATE		NAME	CLASS	SUBCLASS	1	ING ATE	
	4,554,101	11/19/85	Норр				01/28/83		
	5,272,071	12/21/93	Chappel				05/28	/92	
	5,626,846	05/06/97	Dean				05/30	/95	
· · · · · · · · · · · · · · · · · · ·	5,641,487	06/24/97	Dean			, , , , ,	03/26	/93	
	5,641,670	06/24/97	Treco et al.						
	5,672,488	09/30/97	Dean				05/30/95 05/23/97		
· · · · · · · · · · · · · · · · · · ·	5,916,768	06/29/99	Dean	· · · · · · · · · · · · · · · · · · ·					
	5,710,038	01/20/98	Mes-Masson et	t al.		11/2		/94	
	5,869,053	02/09/99	Stern et al.				08/17	/93	
Brish of		FO	REIGN PATENT	DOCUMENTS		1.0	, v. 2 - 1 d		
EXAMINER'S		100 A Magazina (100 A)					Trans	slation	
INITIALS	PATENT NO.	DATE	COUNTRY		CLASS	SUBCLASS	Yes	No	
			_				 		
The respect of the last	OTH	ED ADT (Incl	 	itle, Date, Pertinent	Page Et		. 198	L	
		al salas er el commonant de com		ction of the Zona Pe				<u>. 3 11</u>	
	Characterization	of the Protein	s of the Mouse O	ocyte's Zona Pellucio	da." Dev. I	<i>Bio</i> . Vol. 76, p	p. 185-2	202.	
· · · · · · · · · · · · · · · · · · ·	Barbosa, James	A. 1987. "Sit	e-Directed Mutage	enesis of Class I HL	A Genes: R	tole of Glycosy	lation i	n	
				" J. Exp. Med. Vol.			. C .1		
	Burkman, Lani J	. et al. 1988.	"The Hemizona A	Assay (HZA): Develo Iemizona Pullucida t	opment of a	i Diagnostic Te ertilization Pot	st for the	ne	
	Fertility and Ste			iemizona i unucida t	o i redict i	Crtiffzation 1 of	Ontian.		
	Kinloch, Ross A	. et al. 1988.	"Primary Structur	e of the Mouse Sper	m Recepto	r Polypeptide I	Determin	ned l	
	Genomic Clonin	g." Proc. Nat	l. Sci. Vol. 85, pp	. 6409-6413.					
	Mansour, Suzan	ne L. 1988. "	Disruption of the	Proto-Oncogene Int-	2 in Mouse	Embryo-deriv	ed Sten	n 18	
	Cells: A General 349.	Strategy for	argeting Mutation	ns to Non-Selectable	denes. No	mure. voi. 330	o, pp. 34	+0-	
<u> </u>		1989. "Mam	malian Sperm Inte	eraction with Extrace	llular Matr	ices of the Egg	." Oxfo	ord	
	Reviews of Repr	oductive Biolo	gy. Vol. 11, pp. 3	39-388.					
	Chamberlin et al	. August 1990). "Human Homo	log of the Mouse Sp	erm Recep	tor." Proceedi	ngs of ti	he	
	National Acader	ny of Sciences	oj USA. VOI. 8/,	pp. 6014-6018, XP-	00210837.				
EXAMINER	.1		Ir	DATE CONSIDERE					
PARMINER			-	00.10102102	-				

(OIPE	
(2	DEC 1 82	30/2
18	TRADE	hita

FOREIGN PATENT DOCUMENTS EXAMINER'S	al. GR 16	ROUP 641 SUBCLASS	FILING DATE
APPLICANT Ke-Wen DONG et FILING DATE April 9, 2001 U.S. PATENT DOCUMENTS EXAMINER'S INITIALS PATENT NO. DATE FOREIGN PATENT DOCUMENTS EXAMINER'S	GR 16	641	
FILING DATE April 9, 2001 U.S. PATENT DOCUMENTS EXAMINER'S INITIALS PATENT NO. DATE NAME CI FOREIGN PATENT DOCUMENTS EXAMINER'S	GR 16	641	
EXAMINER'S INITIALS PATENT NO. DATE NAME CI-	ASS S	SUBCLASS	
INITIALS PATENT NO. DATE NAME CL FOREIGN PATENT DOCUMENTS EXAMINER'S	ASS S	SUBCLASS	
EXAMINER'S			
EXAMINER'S	T.		
	ASS S	SUBCLASS	Translation Yes No
OTHER ART (Including Author, Title, Date, Pertinent Page	es, Etc.)	* .	
Saling, Patricia. 1991. "How the Egg Regulates Sperm Function During of Fantasies." Biology of Reproduction. Vol. 44, pp. 246-251. Beebe, Stephen J. et al. 1992. "Recombinant Mouse ZP3 Inhibits Sperm Acrosome Reaction. Dev. Biol. Vol 151, pp. 48-54. Oehninger, S. et al. 1992. "Hermizona Assay and Its Impact on the Identi Sperm Dysfunctions." Andrologia. Vol. 24, pp. 307-321. Kinloch et al. January 1995. "Mapping the Mouse ZP3 Combining Site for Site-Directed Mutagenesis." Proceedings of the National Academy of Scie 267, XP-002108572. Clark et al. 1996. "Role for Glycoconjugates in Cellular Communication System." Molecular Human Reproduction. Vol. 2, No. 7, pp. 513-517. Clark, Gary F. et al. 1996. "A Role for Glyconjugates in Human Develop embryonic Defense System Hypothesis." Human Reproduction. Vol. 11, Bagavant et al. March 1997. "Immunogenicity and Contraceptive Potenti Vaccine." Biology of Reproduction. Vol. 56, No. 3, pp. 764-770, XP-002 Chapman et al. 1997. "2. Sperm-zona Interaction and Recombinant DNA Human Reproduction. Vol. 3, No. 8, pp. 646-650. Hansen et al. 1997. "O-GLYCBASE Version 2.0: a Revised Database of Nucleic Acids Research. Vol. 25, No. 1, pp. 178-282. Patankar et al. 1997. "Expression of Glycans Linked to Natural Killer Ce Pellucida." Molecular Human Reproduction. Vol. 3, No. 6, pp. 501-505. Chen et al. May 1998. "Inactivation of the Mouse Sperm Receptor, mZP. Individual Serine Residues Located at the Combining Site for Sperm." Pr pp. 6193-6197. Hansen et al. 1998. "NetOglyc: Prediction of Mucin Type O-glycosylatic Context and Surface Accessibility." Glycoconjugate Journal. pp. 115-13	Binding a fication a fication a fication a first sperm ances of U in the Hu ment: The pp. 467-4 al of a Zo 108575. A Technol O-glycos Il Inhibiti B, by Site-oc. Natl. A first B	and Induces and Treatment by Exon Swars Vol. 92. Iman Reproduce Human Fed 473. In Pellucida Sylated Protection of the Human Fed 473. In Pellucida Sylated Protection of the Human Fed 473.	the nt of Huma rapping and 2, pp. 263-ductive sto-a 3 Peptide scular sins."

SHEET 3 OF 6

						<u> </u>	<u> </u>			
	•			ATTY. DOCKET NO. SERIAL NO.						
INF	ORMATION	DISCLOSU	113019.179US2		09/829,073					
1111	CITATION									
	APPLICA	ATION								
IP 8										
/0.	(PTO-1	449)								
/	2003	112)		APPLICANT						
(DEC 1 B	2000			Ke-Wen DONG et al.						
\ 2	\\$\\\			FILING DATE GROUP						
My and	or it to the		April 9, 2001 1641							
PART & TRACE	منظمان 					1041				
		U.S.	PATENT DO	CUMENTS						
EXAMINER'S			<u> </u>	<u> </u>	I	T		ING		
INITIALS	PATENT NO.	DATE	<u> </u>	NAME	CLASS	SUBCLASS	D.	ATE		
		FOREIC	GN PATENT	DOCUMENTS						
EXAMINER'S			a cook with with one of			I	Translation			
INITIALS	PATENT NO.	DATE	CO	UNTRY	CLASS	SUBCLASS	Yes	No		
						_	ļ			
							<u> </u>			
	OTHE	R ART (Includin	ig Author, Ti	tle, Date, Pertinen	t Pages, Et	c.)				
	Chirgwin, John M	., Alan E. Przyby	la, Raymond	J. MacDonald, and	William J.	Rutter. 1979. '	'Isolati	on of		
	Biologically Activ	e Ribonucleic Ac	id from Source	ces Enriched in Rib	onuclease."	Biochemistry.	Vol. 1	18, No.		
	24, pp. 5294-5299) <u>. </u>				· · · · · · · · · · · · · · · · · · ·				
	Bleil, Jeffrey D. a	nd Paul M. Wassa	arman. July l	980. "Mammalian	Sperm-Egg	Interaction: Ide	entifica	ation		
	pp. 873-882.	in Mouse Egg Zo	nae Pellucida	e Possessing Recep	tor Activity	for Sperm. C	eu. v	01. 20,		
	Dunbar Ronnie S	Cecilia Liu and	David W Sa	mmons. 1981. "Id	entification	of the Three V	laior P	roteins		
	of Porcine and Ra	bbit Zonae Pelluc	idae by High	Resolution Two-Di	mensional	Gel Electrophoi	esis:			
	Comparison with	Serum, Follicular	Fluid, and O	varian Cell Proteins	." Biology	of Reproduction	n. Vol	. 24,		
	pp. 1111-1124.									
	McIlhinney, R. A.	. J. and Shashikan	t Patel. Marc	h 1983. "Character	ization of t	he Fibronectin S	Synthe	sized		
· · · · · · · · · · · · · · · · · · ·	by Human Germ (Cell Tumors." Ca	incer Researc	h. Vol 43, pp. 1282	2-1288.	1 '1 '27		. 7702		
				Iay 1985. "O-Linke		cnarides of Mo	use Eg	g ZP3		
	Account for its Sp	N Anna Dall In	ne E Oates o	Vol. 41, pp. 313-3 nd Minoru Fukuda.	24. June 1095	"Embryonal				
	Lactosaminoolyca	n: The Structure	of Branched I	actosaminoglycans	with Nove	l Disialosvi (Si	alyl			
	alpha2→9 Sialvl)	Terminals Isolate	ed from PA1 I	Human Embryonal	Carcinoma	Cells." The Joi	ırnal o	f		
	Biological Chemis	stry. Vo. 260, No.	. 11, pp. 6623	3-6631.						
	Cross, Nicholas L	., Patricio Morale	s, James W. C	Overstreet, and Fred	erick W. H	anson. May 19	86. "T	`wo		
		or Detecting Acro	osome-Reacte	d Human Sperm."	Gamete Res	search. Vol. 15	, pp. 2	13-		
	226.	<u> </u>	11 11 6	34 61	I	- T 1007	<u>"O</u>	••		
				M. Chamow, and						
				zation of a cDNA C ci. USA. Vol. 83, p			veceb	101 01		
				R. Franken, Thinu			ks, and	Garv		
	D. Hodgen. April	1988, "The Hen	nizona Assav	(HZA): Developme	nt of a Dias	gnostic Test for	the Bi	nding		
	of Human Sperma	atozoa to the Hum	an Hemizona	Pellucida to Predic	t Fertilizati	on Potential."	Fertilit	y and		
	Sterility. Vol. 49,		97.							
EXAMINER				ATE CONSIDERE	ED					
1										

						SHEET 4 OF	<u> </u>		
				ATTY. DOCKET NO. SERIAL NO.					
INE	ORMATION	DISCLOS	HIRE	113019.179US2		09/829,073			
11/1									
	CITATION								
	APPLICA	ATION				- 1			
TPE									
/0	(PTO-1	449)							
DEC 1 8 200		,	APPLICANT						
ון ניבטיי	N 52:			Ke-Wen DONG et al.					
E.	A.C.			FILING DATE GROUP		GROUP			
A TRACTIC	Te musico				April 9, 2001		1641		
157.56			C DATENT DO	-			 		
		U.	S. PATENT DO	OCUMEN 15					
EXAMINER'S INITIALS	PATENT NO.	DATE		NAME	CLASS	SUBCLASS	FILING DATE		
I VIII I LEG	TATIENT NO.	DATE	-			50202.305			
		FOR		DOCKIN (ENTER		<u> </u>			
THE STATE OF THE S		FOR	EIGN PATENT	DOCUMENTS		· · · · · · · · · · · · · · · · · · ·	Translation		
EXAMINER'S INITIALS	PATENT NO.	DATE	co	UNTRY	CLASS	SUBCLASS	Translation		
							Yes No		
	OTHE	R ART (Inclu	ding Author, Ti	tle, Date, Pertinent	Pages, Et	c.)			
	Shabanowitz, R. E	B. and M. G. O	'Rand. 1988. "C	Characterization of the	ne Human	Zona Pellucida	from		
				rt. Vol. 82, pp. 151-					
				gens of Mammalian					
	Immunoreproduct 260.	tion: Conception	on and Contracep	otion. New York: He	emisphere	Publishing Co.	pp. 242-		
		M. 1988. "Zc	ona Pellucida Gly	coproteins." Ann. R	ev. Bioche	m. Vol. 57, pp.	415-442.		
	L			nteraction with Extra					
	Rev. Reprod. Biol.			iteraction with Extra	cential ivi	autees of the L	gg. Oxj.		
	Sambrook, J., E.F	. Fritsch, and	Γ. Maniatis. 1989	9. Molecular Clonin	g: A Labo	ratory Manual.	2 nd Edition.		
	Cold Spring Harb	or Laboratory	Press. pp. 16.32-	16.37.					
				Iodgen. January 199					
	Properties of Sacc	naride Moietie	es in the Hemizor	na Assay." Fertility	ana Steriii	ty. VOI. 53, NO	. 1, pp. 143-		
		iko. Masavuki	Ozawa, Ruo-Par	Huang, and Takash	i Murama	tsu. March 199	0. "A		
				eases During Differe					
		ndoderm Cells	: cDNA Cloning	and Sequence Anal	ysis." <i>J. B</i>	iochem. Vol. 1	08, No. 2,		
	pp. 297-302.	tough M. Cha-	and Tumi	Dean. April 1990.	"Opprito S	nacific Everace	ion of Mouse		
				lucida Genes." <i>Mole</i>					
	No. 4, pp. 1507-1:	•	. 51 die Zona i on	Tion Conos. Mon					
			eiler, and Paul. N	1. Wassarman. Aug	ust 1990.	"Genomic Orga	nization and		
				Glycoprotein hZP3,	the Hamst	er Sperm Recep	otor."		
	Developmental Bi			alian Coama Dagante	m" David	onwant Vol 1	00 nn 1 17		
				alian Sperm Recepto					
				alian Fertilization by	Zona Pell	lucida Glycopro	otens." J .		
	Reprod. Fert., Sup 1991. "Errata." I			45. pp. 203-204	,				
EXAMINER				ATE CONSIDEREI					
LAMMILK			ا		-				

SHEET 5 OF 6

						<u> </u>			
				ATTY. DOCKET N	SERIAL NO.				
INIE	ORMATION	113019.179US2 09/829,073							
плг									
	CITATION								
	APPLIC A	ATION							
OIP	E. C.								
/ 0 •	(DTO 1	440)							
/	(PTO-1	.449)		ADDI ICANO					
	2003			APPLICANT	i at al				
PATTE MASE	\$			Ke-Wen DONG	jetal.				
(B)	1			FILING DATE GROUP					
BARACE	in A			April 9, 2001		1641			
		U.	S. PATENT D	OCUMENTS		L - 		-	
EXAMINER'S	<u> </u>					T	FIL	ING	
INITIALS	PATENT NO.	DATE		NAME	CLASS	SUBCLASS	DATE		
	-								
	<u> </u>	FORI	EIGN PATEN	T DOCUMENTS		<u> </u>	!		
EXAMINER'S					T	SUBCLASS	Tran	slation	
INITIALS	PATENT NO.	DATE	C	OUNTRY	CLASS		Yes	No	
				· · · · · · · · · · · · · · · · · · ·	<u>-</u> .			<u> </u>	
						<u> </u>	<u> </u>	<u> </u>	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)									
Saling, Patricia M. 1991. "How the Egg Regulates Sperm Function During Gamete Interaction: Facts and Fantasies." <i>Biology of Reproduction</i> . Vol. 44, pp. 246-251.									
					. Tom Eu	arct Jurian Da	on and		
	Beebe, Stephen J., Lisette Leyton, Deborah Burks, Motoharu Ishikawa, Tom Fuerst, Jurrien Dean, and Patricia Saling. January 1992. "Recombinant Mouse ZP3 Inhibits Sperm Binding and Induces the								
				Vol. 151, pp. 48-54.	CIIII DIIIGI	ing and modeces	tile		
	Thillai-Koothan, I	Marcel Van	Diun, and R. Jo	ohn Aitken. May 199	3. "Clonir	ng. Sequencing	and Oc	cyte-	
				ceptor Protein, ZP3."					
	Lee, Vaughan H.,	Eric Schwoebe	el, Sarvamanga	la Prasad, Peter Cheur	ng, Theres	e M. Timmons,	Richar	·d	
	Cook, and Bonnie	S. Dunbar. Ju	ine 1993. "Ider	tification and Structu	ral Charac	terization of the	75-kD)a	
	Rabbit Zona Pellu	cida Protein."	The Journal of	Biological Chemistry	. Vol. 268	3, No 17, pp. 12	412-12	417.	
	Liang, Li-Fang an	d Jurrien Dean	. 1993. "Cons	ervation of Mammalia	in Seconda	ary Sperm Rece	ptor G	enes Zol	
	156, pp. 399-408.	oler of the Hun	nan Gene to Fu	nction in Mouse Oocy	ies. Dev	еюртетан Бю	ogy. V	oi.	
	Varki, Aiit 1993	"Biological R	Roles of Oligos	accharides: All of the	Theories A	Are Correct." G	lycobio	ology.	
	Val. 3, No. 2, pp.								
-	Barratt, C.L.R., A	. Whitmarsh, D	D.P. Hornby, S.	Clements, I.D. Cooke	, and H.D	.M. Moore. 199	94.		
				Necessary to Induce the	ne Human	Acrosome Read	ction"		
	(Abstract No. 33).				d C Clei-	ner and D W/:11	rine 1	004	
				chwahn, E. Schwoebe stry, Immunochemistr				<i>∍</i> ⊅4.	
				. Vol. 6, pp. 331-347.		iai Diology, alic	•		
				Meinecke, Edda Töpf		n, Susanne Pfist	erer, ai	nd	
				Mouse ZP3 Protein in					
	Against Synthetic	ZP3 Peptides.	" Biology of Re	production. Vol. 51,	pp. 193-20	04.			
		. "[2] Metabol	ic Radiolabelin	g of Glycoconjugates.	" Method	ls in Enzymolog	y. Vol	l. 230,	
	pp. 16-32.	Cl 1 C 7	1.11	D.H.J. 124	.1-1 C	ala 17:1	005		
				y D. Hodgen, and Mar					
				acental Protein 14 Reida." Fertility and St				83.	
EXAMINER	1 Spermatozoa to B	ind to the Hull		DATE CONSIDEREI		05, 1.0. 2, pp	2., 3		

SHEET 6 OF 6

		•		ATTY. DOCKET NO. SERIAL NO.					
INE	OPMATION	113019.179US2		09/829,073					
INFORMATION DISCLOSURE									
	CITATION								
APPLICATION									
(IP)	, mmo 1	4.40\							
\Q \. \	O (PTO-1449)								
/	10			APPLICANT Ke-Wen DONG et al.					
1 6 6 6 6 6	2003 👊								
\ ₂	<i>[2]</i>			FILING DATE GROUP					
(The	Sec.		•	April 9, 2001		1641			
PARTIE PARCE		U.	S. PATENT DO	DCUMENTS		· · · · · · · · · · · · · · · · · · ·			
EXAMINER'S					<u> </u>	<u> </u>	FIL	ING	
INITIALS	PATENT NO.	DATE	1	NAME	CLASS	SUBCLASS	DA	ATE	
		FOR	EIGN PATENT	DOCUMENTS					
EXAMINER'S	PATENT NO.	DATE	CC	DUNTRY	CLASS	SUBCLASS	Trans	slation	
INITIALS	FAIENT NO.			ONTRI			Yes	No	
	ОТНЕ	R ART (Inclu	ding Author, Ti	itle, Date, Pertinent	Pages, Et	c.)		-	
	Burks, D. J., R. Ca	arballada, H. D	. M. Moore, and	P. M. Saling. July	1995. "Int	eraction of a Ty	rosine		
	Kinase from Hum	an Sperm with	the Zona Pelluc	ida at Fertilization."	Science.	Vol. 269, pp. 83	3-86.		
	Barratt, Christoph	er L.R. and Da	vid P. Hornby.	"Induction of the Hu	man Acros	some Reaction I	y rhuZ	′P3."	
		erm Acrosome	Reaction. Collo	que INSERM/John I	ibbey Eur	otext Ltd. Vol.	236, p	p.	
	105-122.					13773		1005	
	Lust, J.A., D.F. Je	linek, K.A. Do	onovan, L.A. Fre	derick, B.K. Huntley	, J.K. Braa - Form of	iten, and N.J. M	iainie. Floukis	1995.	
				A Encoding a Solublunol. Vol. 194, pp. 1		the numan inte	Heukii	1-0	
	Whitmarsh, A.J.,	M.J. Woolnoug	gh, H.D.M. Moo	re, D.P. Hornby, and	C.L.R. Ba	arratt. 1996. "E	Biologi	cal	
				in vitro: Potential for	a Sperm F	function Test."	Molec	ular	
	Human Reproduc	tion. Vol. 2, N	o. 12, pp. 911-9	19.	aambar 10	06 "Inhihition	of C E	Protein	
	in Human Sparm	, Patricio J. IV	iorales, and Ursi	ıla F. Habenicht. De Reaction and Zona I	cember 19 Pellucida B	190. Innibiuoli Rinding <i>" Fertil</i>	oi G F itv and	Tolem !	
	Sterility. Vol. 66,			Acadion and Zona I	Jiidoldu L		, and		
	Brewis, I.A., R. C	layton, C.L.R.	Barratt, D.P.J. I	Hornby, and H.D.M.	Moore. 19	96. "Recombin	nant Hu	ıman	
	Zona Pellucida Gl	ycoprotein 3 I	nduces Calcium	Influx and Acrosome	e Reaction	in Human Sper	matozo	oa.''	
	Molecular Human	i Reproduction	. Vol. 2, No. 8,	рр. 583-589.					
				1996. "The Role of		rate in Sperm-Z	.P3		
				ol. 2, No. 10, pp. 76		box 1006 "	Engles	ting	
				ri M. Skinner, and Bo tibodies to Rabbit 55				ung	
				eproduction and Dev					
	Dong Ke Wen T	ing Fung Chi	Yu Wen Iuan C	hih Wei Chen, Zhiyo	ong Lin. X	iao-Oin Xiang.	Marv		
	Mahony, William	E. Gibbons, a	nd Sergio Oehni	nger. April 2001. "C	Characteriz	ation of the Bio	ologic		
	Activities of a Rec	combinant Hur	nan Zona Pelluc	ida Protein 3 Expres	sed in Hun	nan Ovarian	-		
			Am. J. Obstet. (Gynecol. pp. 835-84	4				
EXAMINER			L L	OATE CONSIDEREI)				